

MIXER++

Manual v1.3

This very versatile mixer combines several functions in a small space (only 12HP):

4 independent channels each proposing:

- attenuator for the input level,
- on / mute selector, (position visible by a green / red two-color led),
- auxiliary send pre / post (adaptable level),
- pan (potentiometer with central detent),

Add to this the input "4" which is mono or stereo (can be used in return of effect), an attenuator for the general level, a stereo output on 3.5mm mini jack, and of course, it manages both the CV and audio signals. Possibility to add an optional vumeter (see page 4).

It is recommended to lower the output volume before any connection ;-)

Connecting the ribbon cable

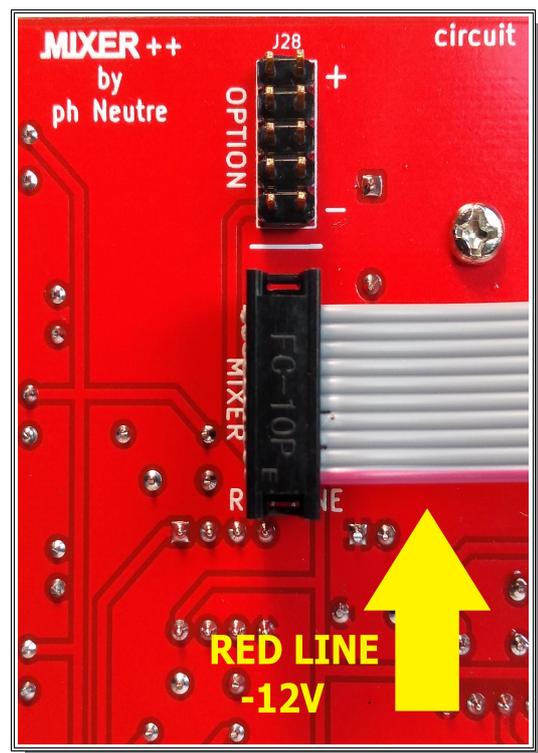
! Be careful to always respect the connection direction of the tablecloth: by convention, the colored part (usually red / pink) of the ribbon represent **-12V** !

Note : on all PCB — ph —, the -12V « red line » is screen printed near the power connector.

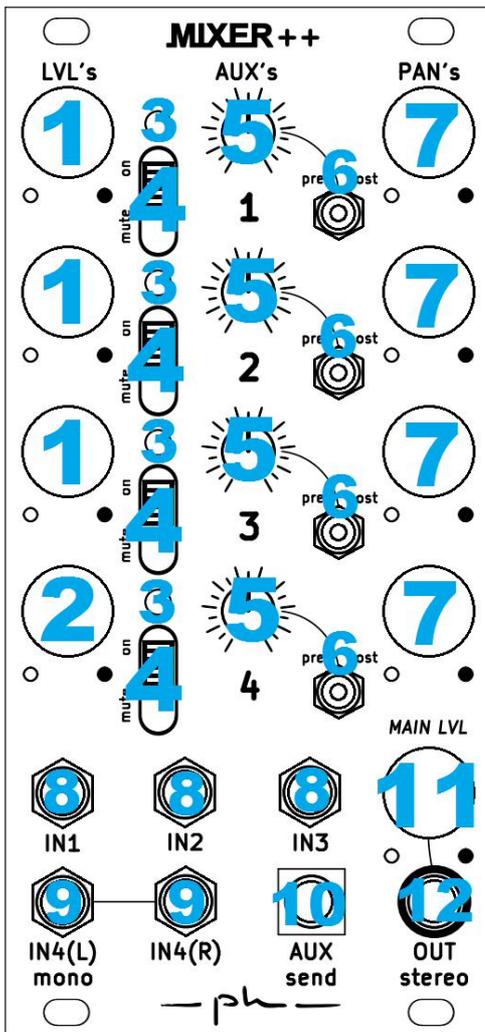
Version 1 (2018-2019):



Version 2 (2020-...):



Presentation



- 1: Level attenuator
- 2: Level attenuator (mono / stereo)
- 3: Bi-color LED (green: active channel / red: muted)
- 4: Mute activation selector
- 5: Auxiliary Send Potentiometer
- 6: Selector routing auxiliary sending in pre or post attenuator
- 7: Pan potentiometer
- 8: mono jack IN
- 9: Jack IN mono (L) or stereo (L + R)
- 10: Jack OUT auxiliary SEND mono
- 11: Global output attenuator
- 12: 3.5 mm stereo jack OUT

Detailed description

- 1) Input level attenuator (logarithmic curve)
- 2) Input level attenuator, note that this one is stereo (logarithmic curve)
- 3) Two-color channel activation status LED: green = active / red = muted.
- 4) Mute selector
- 5) Auxiliary send potentiometer (turned all the way down, it can bring a slight decrease in the level of the channels concerned, even a distortion, bring back a little bit backwards)
- 6) Selector routing the auxiliary signal in pre-attenuator or post-attenuator
- 7) Central DETENT pan potentiometer. It allows to locate a sound in a stereo space.
- 8) 3.5mm mono jack input

9) Inputs two functions:

- mono signal: insert a jack in (L). Aux send can be used as for other channels. Note however that the send level is lower on this channel than on the previous 3.

- stereo signal: insert 2 jacks in L & R, inputs adapted for stereo signals (feedback or other ...)

What you should know: in this use, sending the Aux effect to "PRE" is inactive on channel L. Placing the selector on "POST" resolves this limitation. It should also be noted that on this stereo input, the auxiliary send is weaker than on the other 3 mono inputs.

10) 3.5mm mono output jack of the auxiliary send. Output levels are controlled by the "5" knobs. The output is suitable for the input levels of the guitar pedals or effects rack.

11) Mixed output attenuator "main level" (logarithmic curve)

12) STEREO 3.5mm jack mix output (summation of 4 inputs on 1 stereo output)

Note: I do not recommend the use of 3.5mm to 6.35mm adapter, the latter can bring a mechanical overload on the STEREO jack socket.

Prefer a 3.5mm to 6.35mm cable of this type (depending on use):

or

Options available on the back of the module (only from version 2):



This option allows you to configure the level of the AUX send:

READ IMPERATIVELY

- The jumper must be handled **OVER-VOLTAGE (module disconnected)**
- PRE level measurement "Modular" ~ 0 dB (depending on source signal)
- PRE "FX" level measurement ~ -10 dB (depending on source signal)

- **Jumper set up on "Modular"**, the level is modular (therefore relatively high), ideal if you want to use the Auxiliary send as a multiple buffered entries for example, or other...

Please note: this relatively high level should be used with caution. The fact of using several AUX sendings at the same time can bring saturation, be careful to dose the AUX levels of each channel (if I add AUX sendings, I lower their respective levels). ~~It should also be noted that on these potentiometers, the level on the first quarter goes up fairly quickly, then in a more linear fashion, this is normal behavior⁽¹⁾~~

- **Jumper set up on « FX »**, the level is reduced to allow sending to pedals or effect racks...

⁽¹⁾Behavior corrected since December 2020

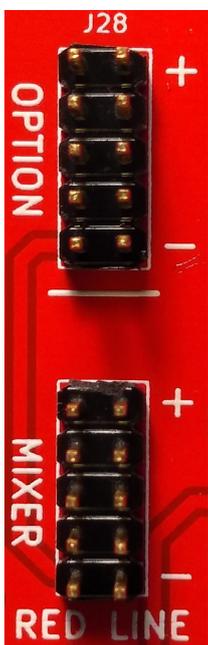


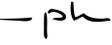
This option allows you to link two Mixer ++ together (connection cable provided during a second purchase of Mixer ++)

In this case, the output of the first Mixer is sent to the output of the 2nd Mixer. You thus have 8 channels, including two stereo as well as two independent auxiliary sendings, all "summed" on the stereo output of MIXER ++ n ° 2.

I recommend not using the audio output "OUT stereo" of the 1st Mixer.

The red line of the ribbon cable must be on the "L" (a white serigraphed line represents it on the PCB)



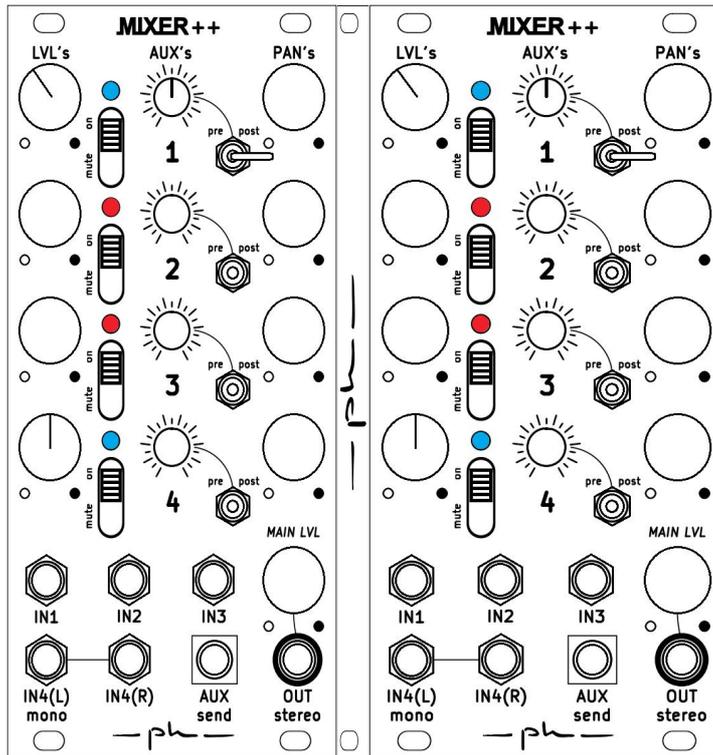
This option ("J28, OPTION") is a parallel connection of the power supply, located upstream of the Mixer ++ power supply. It can be seen as an extension of your busboard. It is dedicated to supplying the optional "VUMETER" module by . Also connected on the "Link to 2d Mix" connector. ", This module allows:

- view the stereo output on a double 12 led's meter
- to separate the stereo mini jack output of the Mixer ++ into two mono L & R mini jack outputs.

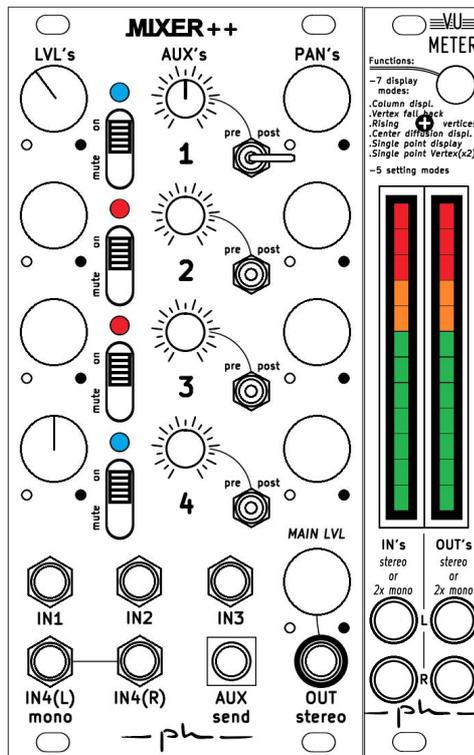
It is best not to use it for other purposes.

Examples of use with optional "ph modular" modules:

- Two Mixer ++ chained together.
The sum of all inputs is directed to the MAIN output of the second Mixer ++.



- Mixer ++ with the VUMETER module (available soon)
Dedicated connections available on the back of the modules, addition of two L&R outputs



Characteristics

Size 12hp (6 cm), epoxy black panel 1,6 mm.

Deep : 36mm with connector.

PCB in epoxy FR4 dual layer, 1,6 mm. Surface finish HASL.

Ribbon cable, M3 and nylon nuts inc.

Consumption : ~12 mA (+12V) / ~12 mA (-12V)

Components tested and assembled by hand, in Brittany, France.

*thank you for your trust
Feel free to give me your opinion, criticism or wishes ...
Other modules are coming*

mail : phneutre56@gmail.com

<http://ph.modular.free.fr/>